



MATERIAL SAFETY DATA SHEET

KLASH[®] 15EC

ASTRA INDUSTRIAL COMPLEX CO., LTD. (ASTRACHEM)
P.O. Box 30447, AL-KHOBAR 31952
KINGDOM OF SAUDI ARABIA

1. PRODUCT IDENTIFICATION

Product Name: **KLASH[®] 15EC**

Chemical Class: Pyrethroid Insecticide

Use: **KLASH[®] 15EC** is an insecticide based on the synthetic-pyrethroid Deltamethrin. It is a potent insecticide, effective by contact and ingestion against a wide range of Public health insect pests.

Producer: **Astra Industrial Complex Co., Ltd.**
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Kingdom of Saudi Arabia
Emergency Tel # (+966) 3 8121 406

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Quantity (g/L)	Chemical structure
Deltamethrin technical 99% CAS No. 52918-63-5 Chemical Name: (S)- α -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC)	15.2 (15 Pure)	
Blend of ionic and non ionic emulsifiers	60.00	
Solvents	828.05	



3. HAZARD IDENTIFICATION

Signs of Poisoning:

Symptoms of acute exposure include severe headaches, fatigue, nausea and anorexia. Severe cases of direct contact cause blurred vision, tightness in chest and convulsions.

Primary Routes of Entry:

Skin contact and absorption and vapor mist inhalation.

Effects of single over exposures:

Ingestion:

Accidental or deliberate ingestion could cause neurological signs and symptoms such as ataxia and convulsions.

Skin Absorption:

May be cause irritation and facial skin sensations.

Inhalation:

May be cause irritation to the respiratory system.

Eyes:

May be cause eye irritation.

4. FIRST AID MEASURES

Emergency and First aid Procedures

Ingestion:

Call a physician or poison control center. If breathing has stopped apply artificial respiration. Do not induce vomiting. Do not give anything by mouth to an unconscious person.

Skin:

Wash affected area with plenty of soap and water. Remove contaminated clothing. Launder contaminated clothing separately. Get medical attention.

Inhalation:

Remove victim to fresh air. If not breathing administer artificial respiration. Avoid unprotected mouth to mouth resuscitation. GET MEDICAL ATTENTION.



Eye:

Flush with clean water for 15 – 20 minutes while holding the eyelid open.

Note to Physician:

There is no specific antidote. Treat symptomatically. If convulsions occur, diazepam (10 or 20 mg for an adult) should be given slowly, intravenously or rectally and repeated if necessary.

5. FIRE FIGHTING MEASURES

Fire and Explosion:

Flash point 41.3 °C
Combustible

Flammable limits in air:

Not determined.

Auto ignition Temperature:

Not determined.

Extinguishing Media:

Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer or ordinary) for large fires. Cool containers from maximum distance.

Unusual fire and explosion hazards:

Noxious fumes may be emitted under fire conditions.

Special fire fighting procedures:

Fire fighters should use self contained breathing apparatus and full turnout gear. Prevent runoff of fire water. Avoid exposure to smoke. (Keep upwind).

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if material is released or spilled:

Dike the area using absorbent materials such as sand or clay. Recover and contain as much product as possible using absorbent. Clean spill area using a solution of water and detergent. Collect and contain wash water and all contaminated absorbent for disposal. If spilled on the ground, the affected area should be excavated to a depth of 1-2 inches. Prevent the spilled product or washing from reaching public sewers or waterways. Wear appropriate protective equipment during the



cleanup. Ensure that tools and equipment are adequately decontaminated.

Waste disposal method:

Dispose of in accordance with local regulations.

Container disposal:

Dispose of in an approved facility according to local regulations.

7. HANDLING AND STORAGE

Store the product in a well-ventilated, secure area out of reach of children and domestic animals. Do not use or store near heat or open flame. Do not store food or feed in storage area. Prevent eating, drinking or smoking in areas where there is a potential exposure to the product. Wash hands before eating, drinking or smoking after using the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Protective equipment should be used during the following procedures:

- Manufacture, formulation or application of this product.
- Repair and maintenance of contaminated equipment
- Clear up of leaks and spills.
- Any other activity that may result in hazardous exposures.

Respiratory Protection:

Use MSHA/NIOSH approved respirator for organic vapors. Use positive pressure contained breathing apparatus where emergency conditions or where exposure limits are exceeded.

Ventilation:

Exhaust appropriate for removal of vapors.

Protective clothing:

Chemical resistant gloves, coveralls, apron and foot coverings.

Eye Protection:

Safety goggles or face shield.

User safety recommendations:

Safety showers and eye wash should be easily accessible.



Personnel Protection:

May irritate the eye and skin. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and washable hat, elbow-length PVC gloves and face shield. After use and before eating drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Assay:	"Deltamethrin" 15 ± 2.25 g/L
Appearance:	Clear Light yellow to Yellow Liquid free of visible impurities
Odour:	Aromatic
Density:	0.8959(Kg/L)
Viscosity:	2.5-3.0 Cp (Brookfield, spindle 2@ 6 r.p.m and 24°C)
Flash Point:	41.5°C
Acidity as H ₂ SO ₄ :	0.017% w/w
Water Contents:	0.16% w/w

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions.
Condition to avoid:	Excessive heat.
Materials to avoid:	Strong oxidizers, acids, and alkalis.
Hazardous polymerization:	will not occur

Emulsion Stability

Initial Emulsification	Complete
Emulsion Stability (2 h)	1.0 ml Cream + 0.25 ml oil
Re-emulsification (24 h)	Complete
Emulsion Stability (24.5 h)	1.0 ml Cream + 0.25 ml oil
Heat Stability (2 weeks @ 54°C)	Passed
Cold Stability	Passed



11. TOXICOLOGICAL INFORMATION

Toxicology Data:

Acute Oral LD ₅₀ (rat)	431 mg/kg
Acute Inhalation LC ₅₀ (4 h rat)	2.69 mg/m ³
Eye Irritation (rabbit)	May cause irreversible eye damage
Dermal Irritation (rabbit)	Irritating to skin, may cause facial skin sensations

Carcinogenicity, Teratogenicity Mutagenicity:

Deltamethrin is not carcinogenic. It did not show any mutagenic or chromosome damaging activity. It is also not teratogenic to mice and rabbits.

12. ECOLOGICAL INFORMATION

Keep out of water supplies ground water or open water. This product is toxic to bees, fish and other aquatic life.

13. DISPOSAL CONSIDERATION

Pesticide wastes are toxic. Do not reuse product containers. Dispose of product containers, waste containers and residues according to local health and environmental regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name	Environmentally hazardous substances, Pyrethroid Pesticide, Liquid, toxic (Deltamethrin)
UN number	UN No 3351
Class	6.1
Packing Group	III
Marine Pollutant	Yes

15. REGULATORY INFORMATION.

Pest Control Product

16. OTHER INFORMATION

Buyer assumes all responsibility for safety and use not in accordance with the product label instructions.